DOCUMENT RESUME

ED 070 803 UD 013 125

AUTHOR	Coats; William D.; And Others
TITLE	A Longitudinal Study of Desegregation in Kalamazoo, Michigan.
PUB DATE	Sep 72
NOTE	36p.; paper presented at the American Psychological Association Annual Convention, Honolulu, Hawaii, September 7, 1972
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Bus Transportation; Classroom Integration; Classroom Observation Techniques; Elementary School Students; *Integration Effects; Interaction Process Analysis; Longitudinal Studies; *School Integration; Secondary School Students; *Student Attitudes; *Student Teacher Relationship; Student Transportation; Transfer Programs; Urban Schools
IDENTIFIERS	*Michigan

ABSTRACT

This paper is based on a compilation of the first two phases of longitudinal research on desegregation effects now being conducted in the Kalamazoo Public Schools. The purpose of the Phase I study was to obtain baseline data during the spring of 1971 prior to the desegregation of the Kalamazoo Public Schools, which was initiated in the fall of 1971. Baseline data were collected for classroom verbal interaction patterns, student opinions, and student leadership status. Student achievement data were also available through the regular testing program of the Kalamazoo Public Schools. The purpose of the Phase II study was to make longitudinal comparisons based on data collected prior to desegregation during Phase I and data collected after approximately one year of desegregation in the spring of 1972. Comparisons were based on measures of the following variables: (1) classroom verbal interaction patterns; (2) student opinions; (3) student leadership status; and (4) student achievement. Additionally, parent opinions pertaining to desegregation were studied. In Spring 1971, the Kalamazoo Public School system was in a unique position in that it was the only school system roughly representative of the black-white racial composition of the United States to attempt system-wide desegregation through two-way busing. (Author/JM)

ED 070803

A LONGITUDINAL STUDY OF DESEGREGATION IN KALAMAZOO, MICHIGAN

Presented by

William D. Coats, Superintendent
Kalamazoo Public Schools
Kalamazoo, Michigan

James W. Boothe, Principal
Wyoming High School
Wyoming, Ohio

David E. Bartz
Department of Research and Development
Kalamazoo Public Schools
Kalamazoo, Michigan

American Psychological Association Convention
Honolulu, Hawaii
September 7, 1972

UD 013125

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

Introduction

This paper is based on a compilation of the first two phases of longitudinal research on desegregation effects now being conducted in the Kalamazoo Public Schools. Each phase has been reported previously in the form of two separate studies: Kalamazoo Desegregation Study--Phase I (1971), and Kalamazoo Desegregation Study--Phase II (1972). The major purpose of the Phase I study was to obtain baseline data during the spring of 1971 prior to the desegregation of the Kalamazoo Public Schools which was initiated in the fall of 1971. Baseline data were collected for classroom verbal interaction patterns, student opinions, and student leadership status. Student achievement data were also available through the regular testing program of the Kalamazoo Public Schools.

The purpose of the Phase II study was to make longitudinal comparisons based on data collected prior to desegregation during Phase I and data collected after approximately one year of desegregation in the spring of 1972. Comparisons were based on measures of the following variables: (1) classroom verbal interaction patterns, (2) student opinions, (3) student leadership status, and (4) student achievement. Additionally, parental opinions pertaining to desegregation were studied.

The above-mentioned studies were reduced considerably in developing the composite report presented here. Complete copies of

the Kalamazoo Desegregation Study--Phase I and the Kalamazoo Desegregation Study--Phase II can be obtained by contacting the Office of the Superintendent, Kalamazoo Public Schools, 1220 Howard Street, Kalamazoo, Michigan 49008.

At the time this study was designed (Spring, 1971), the Kalamazoo Public Schools were based on the neighborhood school concept. At that time the system was in a unique position in that it was the only school system roughly representative of the black-white racial composition of the United States to attempt system-wide desegregation through two-way busing. Most other school systems, often mentioned as having achieved desegregation through busing, simply closed down substandard buildings in black neighborhoods and bused black children into white neighborhoods. Berkeley, the only school system to attempt desegregation via complete two-way busing, was quite atypical due to its dominant university influence and approximately equal racial composition. Furthermore, Berkeley collected no baseline data on several of the variables examined by this study prior to implementing its desegregation plan, thus making it nearly impossible to measure the effect of its desegregation plan on such variables.

The major objective of the Kalamazoo desegregation studies is to provide an outside evaluation of certain components of the school system's desegregation plan. The primary purpose of providing an outside evaluation is to identify strengths and weaknesses of the present court-ordered desegregation plan with the intent of providing the Kalamazoo

Public Schools with feedback which will assist the system in its efforts to function most effectively within the parameters of the court order. Furthermore, the results of the Kalamazoo desegregation studies should be of interest to other school systems operating under a desegregation plan, or to those which will be implementing such a plan in the future, and in general to decision makers in the area of desegregation.

Design

The design of this study involved the construction of instruments for gathering data, selection of the sample, and development of procedures. Each of these is discussed below.

Instrumentation

The specific variables measured in a representative sample of classrooms were classroom verbal interaction patterns, student opinions, and student leadership status. Measures of student achievement were incorporated into this study by the use of test data available through Kalamazoo's existing testing program. Additionally, parental opinions were surveyed. Each of the previously mentioned variables is discussed below.

Classroom Verbal Interaction Patterns

The dependent or outcome variable receiving primary emphasis in this study was classroom verbal interaction patterns. It was assumed that a major function of desegregation is to move toward

integration. Recognizing that the presence of racially mixed classrooms does not guarantee increased positive interaction, it is essential to determine the direction and extent of such changes.

The behavior classification system used in this study is presented in Table 1. This system lists the set of behaviors which served as the basis for the type of classroom verbal interaction patterns studied. Categories 1-5 refer to teacher behaviors while categories 6-8 refer to student behaviors. This system, devised by Coats (1971), is similar to the one developed by Flanders (1970). From this basic eight-category system, one can develop a 12 X 12 matrix displaying information on literally hundreds of verbal interaction variables. Trained observers used the behavior classification system to collect data on spontaneous verbal interactions in representative classrooms by writing down in sequence every three seconds, the number of the category which represented the kind of verbal interaction that had taken place during the preceding three-second period.

Some of the verbal interaction variables of primary interest in this study were: i/d ratio--ratio of percentage of time teacher spends accepting student feelings, praising students, and accepting student ideas to percentage of time spent giving directions, criticizing students, or justifying teacher authority; student talk--percentage of time in which students are talking; vicious circle--percentage of time in which the teacher follows the giving of directions with criticisms of students, follows criticisms with more directions, more criticisms, more directions,

TABLE 1

BEHAVIOR CLASSIFICATION SYSTEM DEVELOPED FOR KALAMAZOO DESEGREGATION STUDY--PHASE I

TEACHER TALK	1* CRITICISM:--statements intended to change pupil behavior from non-acceptable to acceptable pattern; bawling someone out; stating why the teacher is doing what he is doing; extreme self-reference.
	2. DIRECTIONS:--directions, commands, or orders to which a pupil is expected to comply.
	3. LECTURE:-- giving information other than directions.
	4. QUESTIONS:--asking a question about content or procedure with the intent that a pupil answer based on teacher ideas.
	5. ACCEPTANCE:--accepts the ideas or feelings of the student in a non-threatening manner. Praises or encourages pupil action or behavior; as the teacher brings more of his own ideas into play, shift to category three.
STUDENT TALK	6. BLACK STUDENT TALK: 1. RESPONSE:--talk by pupils in response to teacher. Teacher initiates the contact or solicits pupil statement or structures the situation. Freedom to express own ideas is limited. 2. INITIATION:--talk by pupils which they initiate. Expressing own ideas is much more evident, like asking thoughtful questions. Student may disagree with viewpoint of teacher and/or other students in a non-threatening manner. 3. DEROGATORY:--different from 6-2 in that student directs rude, disrespectful and insulting remarks toward the teacher or fellow student.
	7. WHITE STUDENT TALK: 1. RESPONSE:--talk by pupils in response to teacher. Teacher initiates the contact or solicits pupil statment or structures the situation. Freedom to express own ideas is limited. 2. INITIATION:--talk by pupils which they initiate. Expressing own ideas is much more evident, like asking thoughtful questions. Student may disagree with viewpoint of teacher and/or other students in a non-threatening manner. 3. DEROGATORY:--different from 7-2 in that student directs rude, disrespectful and insulting remarks toward the teacher or fellow student.
	8. CONFUSION:--short periods of confusion in which communication cannot be understood by the observer.

*There is NO scale implied by these numbers. Each number is classificatory; it designates a particular kind of communication event. To write these numbers down during observation is to enumerate, not to judge a position on a scale.

etc.; rebellion--percentage of time in which students do not comply with teacher directions and criticisms; drill--percentage of time during which teacher asks questions, students respond, more questions, etc.; sustained expansive activity--percentage of time in which the teacher is engaged in sustained acceptance of student feelings, praise of students, or acceptance of student ideas; reinforcement--percentage of time in which student responses are reinforced (e.g. followed by teacher praise, encouragement, support); restrictive feedback--percentage of time in which student responses are followed by teacher criticisms and general restrictive activity. These and other variables were analyzed for all students combined, for black and white students separately, and further partitioned by grade level and classroom composition. Other behaviors examined included the nature and extent of verbal interaction patterns between and among black and white students.

The use of a behavior classification system to evaluate an outcome of desegregation constitutes a new approach to such evaluations. The technique appears to be solid in that it measures those factors which are most likely to be influenced immediately by changes in racial composition of classes. If desegregation accomplishes anything, either positive or negative, it should show up on some of the behavioral measures. In this respect, the study is quite different from other efforts based solely on student achievement and racial attitudes. Hopefully, the study will provide hard behavioral data which may have a profound influence on the nature of desegregation plans in Kalamazoo as well as across the entire nation. Another benefit of this behavioral feedback is that it will likely prove to be of value to teachers as an inservice

device for helping them to improve the nature of classroom verbal interaction patterns.

Student Opinions

A strong case can be made for the importance of student opinions of the teacher, the class, and each other. A number of behavioral science researchers have conducted studies which support the contention that persons pay more attention to, are more influenced by, have more respect for, and learn more from other persons (teachers) whom they perceive as being competent, enthusiastic, and sincere. Furthermore, studies indicate that students have higher regard for themselves, their teachers, the school, and the subject classrooms where they feel free to participate and initiate their own ideas than where they feel restricted. Student feelings and perceptions regarding important characteristics of teachers and the general classroom environment were determined by using a modification of the Teacher Image Questionnaire, developed by the Educator Feedback Center, Western Michigan University, for secondary students and a simplified version of the questionnaire for elementary students. The modification consisted of some rewording to facilitate communication and of adding a few items similar to those used in the Cooper Smith Self-Esteem Inventory and the Wiley Self-Concept Scale. The validity and reliability of questionnaire items have been demonstrated by the Educator Feedback Center, which has used the instrument in hundreds of classroom analyses. Copies of the Elementary Student

Opinion Questionnaire and of the Secondary Student Opinion Questionnaire are presented in the appendix. At the elementary level, trained observers helped students respond by reading each item to the class, answering questions, and in general helping the children understand the questions.

Student Leaders

The primary intent of studying student leaders was to determine the effect which desegregation has had on the leadership status of black students who were enrolled in majority black classrooms. For the purpose of this study, a majority black classroom was defined as a classroom composed of 70 percent or more black students prior to desegregation. Additionally, black and white student leaders from other types of classrooms were studied.

Teachers participating in Phase I were asked to identify three or four students in their classes whom they felt were seen as student leaders. These student leaders were studied in Phase II in order to determine if they had retained their leadership status after one year of desegregation.

Student Achievement

Changes in student achievement, as related to desegregation, are a major concern of many people. Therefore, prepost student achievement data were collected to determine if student achievement changed following the implementation of a desegregation plan.

Because of Kalamazoo's existing testing program, second and sixth grade Stanford Achievement Test results were available and were incorporated into the study. Fourth and seventh grade achievement data were available through the Michigan Educational Assessment Program and were also used as a measure of student achievement. Hence, student achievement comparisons at several grade levels were possible.

Parental Opinions

Because parental opinions have a significant affect on a child's behavior and performance at school, it was deemed important to obtain measures of parental opinions toward the school and desegregation.

The structured interview technique was used to survey the opinions of a stratified random sample of 400 parents who had children attending the Kalamazoo Public Schools. Ten interviewers visited sample subjects in their homes. Prior to the actual data collection, the ten interviewers received training both with respect to the content of the schedule and the proper technique for calling on parents in their homes.

Sample

Three criteria were used to select classrooms for studying verbal interaction patterns, student opinions, and student leadership status. These criteria were: (1) the teacher had tenure, (2) students were heterogeneously assigned to classrooms

with respect to ability, and (3) students were in a grade level which would be affected by the desegregation plan. The decision to restrict the study to classrooms with tenure teachers was due to teacher anxiety created by a public statement to the effect that all nontenure teachers were to be dismissed if a pending millage vote failed. It was believed that the presence of observers in classrooms of probationary teachers would add to their existing anxiety. Only heterogeneously grouped classrooms were studied because many classrooms homogeneously grouped on ability criteria would be unchanged by the desegregation plan. The third criterion regarding grade level was adhered to because at the secondary level only the seventh and tenth grades were certain to be involved in the desegregation plan at the time the sample was selected. Given these criteria, the sample exhausted all eligible classrooms at the second, fourth, seventh, and tenth grade levels.

Table 2 displays the composition of the 97 classrooms in the Phase I sample with respect to grade level and the primary partitioning (all white, majority white, majority black) used in subsequent analyses. Because the Phase II sample was matched by teacher and grade level, numerous factors, such as teacher transfers due to the desegregation plan, reduced the Phase II sample to 45 classrooms. Phase II student opinions were solicited from 215 black and 1,134 white students. The student leadership status data were based on a sample of 43 students selected from a population of 136 students identified as leaders in Phase I. All second, fo rth, sixth, and seventh grade students were involved in the achievement

TABLE 2

DESCRIPTION OF CLASSROOMS IN PHASE I STUDY

Grade Level	All White	Majority White	Majority Black	Total # of Classrooms	Total # of Students	% Black Students	% White Students
2	13	13	6	32	765	19.59	80.41
4	18	9	4	31	669	14.49	85.51
7	7	13	0	20	457	12.03	87.97
10	3	11	0	14	462	9.09	90.91

testing program. Parental opinions were based on a stratified random sample of 400 parents of public school children.

Procedures

Trained observers were used to collect the necessary classroom data. These observers represented a cross section of the community in terms of race, sex, age, and philosophy, although such representativeness on the part of the observers was not crucial to the objectivity of the study in that the behavior classification system was designed so that it, rather than the personal philosophies of the observers, determined the manner in which observers reacted to various verbal statements. Training involved the progressive use of audio and video tapes of classrooms concluding with one half day during which all observers collected data on the same real classroom situation. By the end of the two days of training the observers had achieved acceptable inter-observer reliability in the use of the behavior classification system. Observers were given additional training in terms of relating with teachers in the study and administering other questionnaires. Throughout the data collection observers met with the researchers to solve various difficulties. Each observer was assigned four classrooms and asked to try to obtain about seven hours of observation during those times when the classroom was in some type of group learning mode. The observers also administered the elementary and secondary student opinion questionnaires.

Teachers participating in Phase I identified three or four students in their classes whom they felt were seen as leaders. A sample of those students identified as leaders in Phase I was studied in Phase II to determine if the students had retained their leadership status. Data regarding student leaders were collected by the researchers.

Student achievement data were collected by the Testing Division of the Kalamazoo Public Schools. The Testing Division was responsible for administering and scoring the tests, as well as computing the results.

Ten interviewers were trained to collect the parental opinion data using the structured interview technique. The interviewers were trained both with respect to using the structured interview technique for collecting data and proper procedures for visiting parents in their homes. Parental opinion data were collected within a two-week time period near the end of the 1971-72 school year.

Verbal interaction patterns and student opinions were statistically analyzed by employing one-way analyses of variance, t ratios, and correlated t tests. Descriptive statistics were used to analyze student leadership status, student achievement, and parental opinions.

Results

The Phase I and Phase II results are presented separately in this section.

Phase I

Verbal interaction patterns and student opinion results for the Phase I portion of the study are presented below.

Elementary Verbal Interaction Patterns

There was no meaningful relation between racial composition under the neighborhood school concept and any of the classroom verbal interaction variables studied. Essentially, the same verbal interaction patterns were observed at the elementary level in all white, majority white, and majority black classrooms. Teachers were just as accepting of black student ideas as they were of white student ideas, and they engaged in the same amount of criticizing, directing, lecturing, and questioning regardless of the racial composition of the classroom. When verbal interaction patterns involving black students were studied separately from those involving white students, a few statistically significant differences were found. Most of these differences consisted of more sustained verbal exchange within than between races.

Secondary Verbal Interaction Patterns

Several significant differences on overall classroom verbal interaction patterns were observed. The nature of these differences was such that all white classrooms were characterized by less structure than were racially mixed classrooms. Students in all white classrooms initiated their own ideas and thoughts

more often and engaged in more sustained student talk than did those in mixed classrooms. Mixed classrooms, on the other hand, had significantly more drill and short student response to teacher questions. Nonderogatory sustained verbal exchanges were more likely to occur within than between races, and derogatory exchanges occurred more frequently between than within races. However, as was true with elementary students, derogatory exchanges seldom occurred.

Elementary Student Opinions

White elementary children did appear to be more sensitive than did black children to the racial composition factor. White children in all white classrooms reported that their teacher liked them better than did white children in majority white classrooms, who in turn said that their teacher liked them better than did white children in majority black classrooms. Also, white children in all white classrooms believed that they were learning more than did white children in majority white classrooms, while white children in majority black classrooms thought they were learning the least of the three groups compared. White children in all white or majority white classrooms evidenced little concern about other students picking on them while white children in majority black classrooms indicated considerable concern in this regard. Finally, white children in all white classrooms viewed the children in their class to be significantly more friendly than did white children in either majority white or majority black classrooms.

There were no differences in the opinions of black children which could be attributed to racial composition of classrooms. However, black children had significantly more unfavorable attitudes toward school than did white children on several items. Black children: (1) did not view their ideas to be as important to the teacher as did white children; (2) thought their teacher got angry more frequently than did white children; (3) liked school less than did white children; and (4) rated their classmates as being less friendly than did white children.

Secondary Student Opinions

When secondary student opinions were related to racial composition of classrooms, no significant relationship was found for any of the sixteen items on the questionnaire. The attitudes of secondary students, both black and white, were unrelated to the racial composition of their classrooms.

Two significant differences between opinions of black students and white students were observed. White students indicated that ideas were presented at a level which they could understand much more so than did black students, and they reported that teachers were able to see things from their point of view to a higher degree than did black students.

Phase II

Phase II contains the results of the comparisons of the Phase I baseline data (1971) with similar measures obtained in the spring of 1972 following approximately one school year of desegregation. Additionally, parental opinions were studied in Phase II. Results of studying the following variables in Phase II are presented below: (1) verbal interaction patterns, (2) student opinions, (3) student leadership status, (4) student achievement, and (5) parental opinions.

Verbal Interaction Patterns

Verbal interaction patterns are reported separately below for the elementary and secondary levels.

Elementary verbal interaction patterns. The results of the data analysis for the 26 elementary classrooms studied are presented in Table 3. An inspection of these analyses revealed significant differences for 14 of the 21 variables investigated. Complete operational and theoretical definitions of all variables studied are reported in the Phase I study cited above. In two instances, variable 5 (confusion) and variable 11 (drill), there was an increase shown for 1972. The t values for the remaining 12 variables, however, indicate that there was significantly less verbal activity defined by variables 1, 2, 3, 4, 8, 23, 25, 26, 35, 37, 43, and 61 in 1972 than in 1971. For example, there was less total student talk (variable 26), student initiated talk (variable 23) and student-to-student verbal interaction (variable 43). Teachers spent less time in 1972 lectur-

TABLE 3

PHASE II CLASSROOM INTERACTION ANALYSIS RESULTS FOR ELEMENTARY

Variable Number	Variable Name	1971	1972	t
1	Sustained acceptance	.86	.18	1.97*
2	Vicious circle	6.03	3.62	2.57**
3	Lecture	30.07	22.99	3.02**
4	i/d	.23	.13	2.83**
5	Confusion	1.49	16.01	-8.96***
8	Rebellion	1.07	.17	2.60**
11	Drill	11.15	14.40	2.15*
22	Student response	27.97	30.73	-1.07
23	Student initiated talk	12.86	5.52	3.97***
24	Student derogatory talk	.07	.17	-1.42
25	Student nonderogatory talk	40.83	36.25	2.03*
26	Student talk	40.90	36.43	2.00*
35	Restrictive teacher feedback to nonderogatory student talk	2.30	1.13	2.58**
36	Restrictive teacher feedback to derogatory student talk	.01	.04	-1.49
37	Teacher acceptance of non-derogatory student talk	2.22	.61	4.30***
38	Teacher acceptance of derogatory talk			
43	Nonderogatory student response to nonderogatory student talk	27.33	21.77	2.45*
48	Nonderogatory student response to derogatory student response	.00	.01	-.72
53	Derogatory student response to nonderogatory student talk	.01	.01	-1.24
58	Derogatory student response to derogatory student talk	.01	.01	-1.28
61	Sustained student talk	8.37	3.68	3.01**

*Significant at .05 level
**Significant at .01 level
***Significant at .001 level

(variable 3), but utilized more drill (variable 11). In general, the 1972 classroom verbal interaction patterns seemed to be more structured than those of 1971. Many of the sample teachers indicated that the time of year that the study was conducted accounts for this finding, but an equally plausible explanation is that teachers felt a greater need to structure the desegregated elementary classroom in 1972.

Secondary verbal interaction patterns. The summary data regarding the 19 secondary classrooms studied are displayed in Table 4. Of the 21 variables investigated, significant differences were indicated for 11 of the variables. With the exception of variable 11 (drill), the nature of the differences is similar to those reported for the elementary classrooms. This finding is not as surprising as one might suspect on first examination, since considerable changes in classroom and school racial composition were instituted at the secondary level in 1972.

Student Opinions

The following comparisons were made for student opinions: (1) white elementary 1971 to white elementary 1972, (2) white secondary 1971 to white secondary 1972, (3) black elementary 1971 to black elementary 1972, and (4) black secondary 1971 to black secondary 1972. An additional comparison was made between all students surveyed in 1971 and 1972.

TABLE 4

PHASE II CLASSROOM INTERACTION ANALYSIS RESULTS FOR SECONDARY

Variable Number	Variable Name	1971	1972	t
1	Sustained acceptance	.22	.01	3.16**
2	Vicious circle	6.22	3.34	1.81*
3	Lecture	44.42	44.55	-.03
4	i/d	.29	.03	4.37***
5	Confusion	2.36	19.53	-8.30***
8	Rebellion	1.51	.19	2.94**
11	Drill	8.22	6.25	1.61
22	Student response	12.87	16.61	-1.72
23	Student initiated talk	14.54	3.03	6.86***
24	Student derogatory talk	.04	.07	-.77
25	Student nonderogatory talk	27.42	19.64	3.73***
26	Student talk	27.46	19.71	3.72***
35	Restrictive teacher feedback to nonderogatory student talk	2.96	.64	2.47*
36	Restrictive teacher feedback to derogatory student talk			
37	Teacher acceptance of non-derogatory student talk	2.38	.18	4.83***
38	Teacher acceptance of derogatory talk			
43	Nonderogatory student response to nonderogatory student talk	13.03	9.92	1.46
48	Nonderogatory student response to derogatory student response	15.79	.01	.99
53	Derogatory student response to nonderogatory student talk	----	.02	-1.71
58	Derogatory student response to derogatory student talk	.01	.16	-.57
61	Sustained student talk	6.79	1.02	3.75***

*Significant at .05 level
**Significant at .01 level
***Significant at .001 level

White elementary student opinions. The average opinions measured by items 3, 5, 6, 14, 15, and 17 differed significantly between the 1971 and 1972 white elementary students surveyed (refer to Table 5 for item identification). The average 1972 white elementary student opinions for the previously listed items were less positive as compared to 1971.

TABLE 5

ELEMENTARY OR SECONDARY STUDENT OPINION QUESTIONNAIRE ITEMS

Items	
1. Presentation of ideas	10. Do you feel free to express your ideas?
2. Is teacher fair?	11. Do you like to be called on?
3. Is class orderly?	12. Do you feel you learn a lot?
4. Does teacher like you?	13. Do you worry that other students might pick on you?
5. Is your class fun?	14. Do you like your teacher?
6. Does your teacher respect your ideas?	15. Do you like this school?
7. Encourage student participation?	16. Are students friendly?
8. Can teacher see your point of view?	17. Overall
9. Does teacher get angry?	

White secondary student opinions. For items 7 and 16, the opinions of the white secondary students were less positive in 1972 than in 1971. There was no directional trend indicated by the comparisons of 1971 and 1972 average opinions of the white secondary

students surveyed.

Black elementary student opinions. Only the opinions measured by Item 16, "Are the students in this class friendly?", were significantly different between the 1971 and 1972 groups. The significant difference indicated by Item 16 was in the direction of black elementary students in 1972 feeling that the students in their classes were more friendly as compared to the black elementary students surveyed in 1971.

Black secondary student opinions. Opinions measured by items 3, 5, 7, 10, 12, 13, and 17 differed significantly between the 1971 and 1972 black secondary students surveyed. In 1972, average black secondary student opinions for the previously mentioned items, except Item 16, were less positive as compared to 1971. For Item 13, "Do you worry about other students picking on you?", a positive change occurred. In general, black secondary student opinions were less positive in 1972.

Student opinions (comparisons based on all students surveyed, both black and white). Table 6 presents comparisons of 1971 and 1972 average opinions for all students surveyed. The analyses presented in Table 7 indicate that for items 3, 4, 5, 6, 15, and 17, opinions differed significantly between the 1971 and 1972 groups. The significant differences reflected less positive opinions on the part of the 1972 group.

TABLE 6

PHASE II COMPARISONS
ON STUDENT OPINION QUESTIONNAIRE FOR ALL STUDENTS

Student Opinion Questionnaire Item	1971	1972	t
1. Presentation of ideas	3.9	3.9	.69
2. Is teacher fair?	4.1	3.9	1.52
3. Is class orderly?	3.3	3.1	2.92**
4. Does teacher like you?	3.9	3.8	1.75*
5. Is your class fun?	3.5	3.3	2.87**
6. Does your teacher respect your ideas?	3.6	3.4	2.92**
7. Encourage student participation?	3.7	3.6	.46
8. Can teacher see your point of view?	3.4	3.4	.17
9. Does teacher get angry?	2.8	2.8	.15
10. Do you feel free to express your ideas?	3.2	3.3	-.25
11. Do you like to be called on?	3.2	3.2	.37
12. Do you feel you learn a lot?	3.9	3.8	.69
13. Do you worry that other students might pick on you?	2.3	2.3	.26
14. Do you like your teacher?	3.9	3.8	1.76
15. Do you like this school?	3.7	3.2	3.79***
16. Are students friendly?	3.4	3.3	.59
17. Overall	3.5	3.4	2.44**

*Significant at .05 level
**Significant at .01 level
***Significant at .001 level

Conclusions Regarding 1972 Student Opinions

In general, student opinions were less positive in 1972. With respect to white students, substantial changes were indicated at the elementary level. For black students the greatest change was at the secondary level.

There are numerous possible explanations for student opinions being less positive in 1972 than in 1971. One apparent explanation would be that the desegregation of the Kalamazoo Public Schools prompted the change of student opinions. It is quite possible that the increased number of black students in many of the classrooms studied caused the teacher to modify his or her behavior, which resulted in a change of the classroom environment. It is also possible that because of the value orientations and attitudes of both black and white students toward desegregation, opinions changed from 1971 to 1972. In addition, the fact that many parents of public school children in Kalamazoo were opposed to busing could have influenced the general feelings of their children regarding the school environment.

Regardless of the explanation given for the differences of student opinions from 1971 to 1972, student opinions were significantly more negative in 1972.

Student Leadership Status

Table 7 shows the results regarding those students who were identified as leaders both in 1971 and 1972. The group labeled "Black" in Table 7 is a composite of all black students studied in 1972. As the data in Table 7 indicate, of the 43 students who were

identified as leaders in 1971, 20 (47%) were identified as leaders again this year.

TABLE 7

PERCENTAGE OF STUDENTS IDENTIFIED AS LEADERS BOTH IN 1971 AND 1972

Group	N	Yes	No
All Groups Combined	43	20 (47%)	23 (53%)
Black (Total)	18	10 (56%)	8 (44%)
Blacks in Majority	13	8 (62%)	5 (38%)
Whites	25	10 (40%)	15 (60%)

Comparing the results in Table 7 by group reveals that a greater percentage (62%) of student leaders emerged this year from the majority black group than did student leaders from any of the other groups. Based on these comparisons, the largest percentage of students identified as leaders both years was indicated by black students who were enrolled in majority black classrooms prior to desegregation.

It appears that court-ordered desegregation via two-way busing did not have a negative effect on the leadership status of black student leaders who were enrolled in majority black classrooms prior to desegregation.

Student Achievement

The Kalamazoo Public Schools have traditionally administered the Stanford Achievement Test (SAT) to second and sixth grade

students. Therefore, data were available for comparisons of student achievement before and after desegregation. It is realized, however, that the variable socioeconomic status has a significant effect on student achievement regardless of the influence of desegregation.

In 1971 (prior to desegregation) the composite average of the eight subtests of the SAT for second graders was 2.8, with the test norm being 2.9. In 1972 (near the conclusion of one school year of desegregation) the composite average of the eight subtests of the SAT for second graders was 2.7, with the test norm being 2.8. A comparison between second grade SAT results in 1971 and 1972 indicates that there was no change in student achievement after approximately one school year of desegregation. In both 1971 and 1972 Kalamazoo second grade students were .1 grade equivalent unit below the test norm.

In 1971 the sixth grade composite average for the eight subtests of the SAT was 5.8, with the test norm being 6.5. The sixth grade composite average for the eight SAT subtests in 1972 was 5.9, with the test norm being 6.6. In both years sixth grade students, as a group, scored .7 grade equivalent units below the test norm. Realizing that sixth grade students were only approximately two-thirds of the way through the school year when the SAT was administered, it can be concluded that there was no change in student achievement following desegregation.

Additional data were available for comparisons of student achievement before and after desegregation due to the fact that the Kalamazoo Public Schools participated in the Michigan Educational

Assessment Program in both 1971 and 1972. Fourth and seventh grade students participated in the State's assessment testing program, which is conducted in January of each year. Therefore, the fourth and seventh grade students tested had experienced approximately one half year of desegregation prior to being tested.

One of several measures which is reported by the State to local school districts is the composite achievement district mean. This district mean is based on pupils' standard scores. In 1971 the composite achievement district mean for fourth graders was 49.4, and in 1972 the composite achievement district mean was 49.7. The mean of all district means for composite achievement remained approximately constant from 1971 to 1972. Therefore, fourth grade achievement did not decrease following one year of desegregation. The seventh grade composite achievement district mean in 1971 was 51.2, and in 1972 was 50.1. Although the mean of the district means did decrease slightly from 1971 to 1972, seventh grade student achievement did decrease noticeably.

Changes in student achievement following desegregation, as indicated by the composite achievement district means based on state assessment testing, appear to be inconclusive in that fourth grade achievement increased and seventh grade achievement decreased. It should be noted, however, that although approximately one school year elapsed between the 1971 and 1972 testing dates, this time period reflected only one half year of desegregation.

Parental Opinion

The parental opinion survey revealed numerous findings which were of interest and importance to school personnel. Only the most significant results in respect to desegregation are discussed here.

A majority of the 400 parents surveyed indicated that their children should attend biracial schools, and that interracial interaction was desirable for their children. However, a majority of parents also indicated that their children should attend schools within walking distance of their homes. Therefore, although many neighborhoods are not integrated, it appears that parents want their children to attend biracial schools within the parameters of the neighborhood school concept. This dilemma probably is not unique to the Kalamazoo situation.

Summary

The primary purpose of this study was to provide the Kalamazoo Public Schools with relevant feedback regarding the strengths and weaknesses of the present court-ordered desegregation plan. This feedback was designed to be used by the Kalamazoo Public Schools in its effort to function in the most effective manner within the guidelines of the court order.

The major results from both the Phase I and Phase II portions of the study are summarized on the following pages.

Phase I

At the elementary level there was no meaningful relation between racial composition based on the neighborhood school concept and any of the classroom verbal interaction variables studied. When verbal interaction patterns involving black students were studied separately from those involving white students, a few statistically significant differences were found. Several significant differences on average verbal interaction patterns were observed at the secondary level, which reflected less structure in all white classrooms than in racially mixed classrooms.

In regard to opinions of elementary students, there were no differences indicated by black children which could be attributed to the racial composition of the classroom. White children, however, did appear to be somewhat sensitive to the racial composition factor. Also, black children had significantly more unfavorable attitudes toward school than did white children on several items.

The opinions of secondary students, both black and white, were unrelated to the racial composition of their classrooms. Regarding difference between black and white student opinions, white students indicated that ideas were presented at a level which they could understand much more so than black students. Also, white students reported that teachers were able to see things from their point of view to a higher degree than did black students.

Phase II

The purpose of the Phase II portion of the study was to determine if the desegregation of the Kalamazoo Public Schools was accompanied by significant changes in classroom verbal interaction patterns, student opinions, student leadership status, and student achievement. Also, parental opinions toward the school and desegregation were surveyed. Phase II addressed itself to comparisons of data collected in the spring of 1971 while the schools were still organized on a neighborhood attendance pattern and similar measures gathered in 1972 after one year of desegregation. In general, significant changes were observed in classroom verbal interaction patterns and student opinions. Leadership status was unrelated to desegregation, and no change was reflected in reference to student achievement.

With respect to classroom verbal interaction patterns, both elementary and secondary classrooms experienced numerous changes in the manner in which students and teachers verbally interacted with one another in the classroom. Students verbally interacted with their teachers and fellow classmates to a lesser degree. Although no discernible trend was observed regarding teacher behaviors, significant differences were observed. The general classroom environment in 1972 appeared to be somewhat more structured than in 1971. Interestingly, this attempt to establish a more structured classroom was accompanied by a highly significant increase in confusion, when confusion was studied separately. Numerous explanations are available for this phenomenon, but it seems

plausible to conclude that the desegregated classrooms prompted teachers to create a more structured classroom environment.

In general, student opinions of their teachers, classmates, and school environment were less positive in 1972. Many factors, such as parental attitudes and the time of the year that the study was conducted, could have influenced student opinions. However, the fact cannot be overlooked that the court ordered two-way busing desegregation plan caused many of the negative changes. With respect to black students, the less positive opinions expressed in 1972 are almost exclusively attributed to the secondary level. For white students, the elementary students in 1972 reflected the most significant negative change in opinions.

Furthermore, black students who were leaders when enrolled in majority black classrooms prior to desegregation did not lose their leadership status when they became a minority in a desegregated classroom.

Student achievement was studied by analyzing second and fourth grade Stanford Achievement Test (SAT) results and by also analyzing fourth and seventh grade Michigan Educational Assessment Program test results. In general, there was no change in student achievement from 1971 to 1972.

The parental opinion survey indicated that a majority of parents wanted their children to attend biracial schools. However, they also wanted their children to attend a school within walking distance of their home.

APPENDIX

Elementary Student Opinion Questionnaire

and

Secondary Student Opinion Questionnaire

ELEMENTARY STUDENT OPINION QUESTIONNAIRE

This is not a test because there are no right or wrong answers. We want to find out how you feel about school. Think about the whole year when you mark your answer. No one from your school will see your answers. DO NOT WRITE YOUR NAME. FOLLOW THE DIRECTIONS.

Code

N = Never
L = Little of the time
S = Sometimes
M = Most of the time
A = Always

EXAMPLES	NEVER	LITTLE	SOME	MOST	ALWAYS
A. Do you think you should have school on Saturdays?	N	L	S	M	A
B. Boys talk more than girls.	N	L	S	M	A
QUESTIONS					
1. Do you understand what your teacher says when she talks to you? (Like when she explains things)	N	L	S	M	A
2. Is your teacher fair?	N	L	S	M	A
3. Do the kids in your class behave?	N	L	S	M	A
4. Does your teacher like you?	N	L	S	M	A
5. Is your class fun?	N	L	S	M	A
6. Does your teacher think what you say is important?	N	L	S	M	A
7. Does your teacher want you to ask questions and give your ideas in class?	N	L	S	M	A
8. Is it okay if your idea is different from your teacher's idea?	N	L	S	M	A
9. Does your teacher get angry when little problems come up in class?	N	L	S	M	A
10. Do you feel free to tell your ideas in class?	N	L	S	M	A
11. Do you like to be called on in this class?	N	L	S	M	A
12. Do you feel like you learn a lot in your class?	N	L	S	M	A
13. Do you worry about other students picking on you?	N	L	S	M	A
14. Do you like your teacher?	N	L	S	M	A
15. Do you like your school?	N	L	S	M	A
16. Are the children in your class friendly?	N	L	S	M	A

SECONDARY STUDENT OPINION QUESTIONNAIRE

This is not a test because there are no right or wrong answers. We are interested in your opinion about this class and school based upon the whole year. No one in your school will see your answers. DO NOT WRITE YOUR NAME. Follow the directions.

Directions: Think about the entire school year. Using the code shown to the right, circle the letter that best tells how you feel about each question. After everyone is finished, the papers will be collected.

Code

N = Never
L = Little of the time
S = Sometimes
M = Most of the time
A = Always

		NEVER	LITTLE	SOME	MOST	ALWAYS
1.	Are the ideas presented at a level you can understand?	N	L	S	M	A
2.	Is this teacher fair and impartial in his treatment of all students in the class?	N	L	S	M	A
3.	Is this classroom orderly but also relaxed and friendly?	N	L	S	M	A
4.	Do you feel that this teacher likes you?	N	L	S	M	A
5.	Is this class interesting and challenging?	N	L	S	M	A
6.	Does this teacher have respect for the things you have to say in class?	N	L	S	M	A
7.	Does this teacher encourage you to raise questions and express ideas in class?	N	L	S	M	A
8.	Is this teacher able to see things from your point of view?	N	L	S	M	A
9.	Does this teacher become angry when little problems arise in the classroom?	N	L	S	M	A
10.	Do you feel free to give your own ideas and express your own opinions in this class?	N	L	S	M	A
11.	Do you like to be called on in this class?	N	L	S	M	A
12.	Do you feel like you learn a lot in this class?	N	L	S	M	A
13.	Do you worry about other students picking on you?	N	L	S	M	A
14.	Do you like most of your teachers?	N	L	S	M	A
15.	Do you like this school?	N	L	S	M	A
16.	Are the students in this school friendly?	N	L	S	M	A

REFERENCES

Boothe, J.W. Kalamazoo desegregation study--phase II. (Educator Feedback Center, Western Michigan University) Kalamazoo, Michigan, 1972.

Coats, W.D. Kalamazoo desegregation study--phase I. (Educator Feedback Center, Western Michigan University), Kalamazoo, Michigan, 1971.

Flanders, N.A. Analyzing teacher behavior. Reading, Massachusetts: Addison-Wesley Publishing Co., 1970.